Does institutional logic matter in microfinance delivery? An empirical study of microfinance clients

Abstract

Purpose – From an institutional theory perspective, this study investigates the combined impact of financial capital (microcredit) and human capital development (entrepreneurship training) delivered by Financial Non-Governmental Organisations (FNGOs) on the performance of Micro and Small Enterprises (MSEs) in Ghana.

Design/methodology/approach– Adopting a multiple linear regression analysis, the study used primary data collected from 506 Ghanaian MSEs. Microcredit was measured using four main constructs namely loan cost, loan amount, the flexibility of loan repayment and loan accessibility. Entrepreneurship training was measured using four main constructs namely training content, training efficiency, training frequency and training accessibility. MSE performance was also measured using three main indicators namely sales, employment and profitability growth. The study controlled for business age, industry category, manager's educational level and gender.

Findings- The results of this study show that the combined delivery of financial and human capital development by FNGOs has a significant impact on MSE performance. The social welfare logic adopted by FNGOs seems to be legitimate to the needs and growth of MSEs in Ghana. However, the cost of microcredit remains a drawback, constraining the performance of MSEs in Ghana.

Research limitations/implications – This study was carried out in the Volta Region, which is one of the ten regions of Ghana. Even though the sample size suffices, the findings from this study could not be generalised to the whole of Ghana. Also, this study is a quantitative study and could benefit from a triangulated method where the qualitative inputs could offer insights into the findings in this study.

Originality/value– Theoretically, this study contributes to the understanding of institutions and the type of impact they have on the growth of MSEs. Practically, the provision of a conducive environment and access to financial capital is crucial to the growth of MSEs. Also, the adoption of the social welfare logic in microfinance delivery could be one of the major steps in promoting the performance of MSEs in Ghana.

Keywords: *FNGOs, Ghana, Institutional logic, MSEs, Microcredit*

Paper Type: Research paper

Introduction

The microfinance literature is replete with investigations of various microfinance institutional logics claiming an impact on the poor in developing countries. Typically, the institutional logic of a Microfinance Institution (MFI) determines the nature of the services it provides and how these services are delivered to the poor (Cobb *et al*. 2016). Three different institutional logics are evidenced in the literature namely; the commercial, social welfare and hybrid logics (IM and Sun, 2015). However, there seems to be some ambiguity in identifying and classifying these logics. Moreover, this ambiguity has led to the exploitative behaviour of some MFIs which subsequently leads to the over-indebtedness and vulnerability of microfinance clients (Bateman, 2010; Rodman, 2012). Several researchers including Bateman and Chang (2012:14) have therefore referred to the microfinance impact story as 'elusive and catastrophic' which locks individuals and households in a poverty trap. More so, it has been argued that microfinance seems to be deepening poverty levels of clients rather than alleviating it (Nega and Schneider, 2014).

The Ghanaian microfinance landscape includes both local and international Financial Non-Governmental Organisations (FNGOs) delivering financial services to Micro and Small Enterprises (MSEs). These financial services come as a support to the poor and the poorest in various communities to embrace them in their income generating efforts as well as creating further employment. In pursuing their ''double'' bottom line objectives of financial performance and poverty reduction, these FNGOs operate with a social welfare institutional logic in the delivery of microcredit and other related services such as entrepreneurship training to MSEs (Battilana and Dorado, 2010; Xiang *et al*. 2014; Rajendran and Raya, 2011). Currently, 43 FNGOs including Universal Capital, ASrud Ghana, AIDEZ Small Projects International and Grameen Ghana provide financial services mostly in rural enterprise development programmes which supports the growth across industries (ASSFIN, 2017).

The activities of FNGOS is a global phenomenon with a strong presence in Africa. Evidence shows that 45% of microfinance institutions (MFIs) operating in developing countries are FNGOs. These FNGOs serve about 51% of all microfinance clients of which 73% are female borrowers (Xiang *et al*., 2014). Similarly, in the context of Africa, Moseley and Rock (2004) revealed that FNGO-based lending schemes date as far back as the 20th century notably in

providing loans for small business development and poverty reduction. FNGOs are therefore known to be the poverty-reduction driven institutions in Africa, given that they deliver dynamic pro-poor outreach services. For instance, K-REP and Care Zimbabwe are noted to have provided an extensive financial outreach service in Kenya and Zimbabwe respectively in supporting MSE growth. Similarly, the Small Enterprise Foundation in South Africa has been supportive of several rural MSEs with their solidarity group lending schemes (Moseley and Rock, 2004). As indicated earlier, the focus of FNGOs and their operational activities in Africa is poverty reduction hence their visibility is high in African rural areas where poverty remains persistent and economic activities are at its lowest levels. Mersland and Strøm (2008) argued that FNGOs focus on the depth (client's poverty level) rather than the breadth of poverty reduction (the number of clients served), hence they are likely to adopt the social welfare institutional logic in delivering microcredit and entrepreneurship training to MSEs.

In pursuit of their welfare goals, FNGOs in Ghana need to legitimise their operations which demands conformity to various coercive, normative and mimetic institutions without which the acceptability of their services to the poor could be questionable (DiMaggio and Powell, 1983; Sambharya and Musteen, 2014). However, in conforming to these institutions, and in view of the current economic, political and governance challenges in Ghana, FNGOs are likely to be influenced by strict commercial approaches which may lead to mission drift (Copestake, 2007; Chahine and Tannir, 2010; Mersland and Strøm, 2010). Most often than not, such a tendency would lead to serving the non-poor rather than the poor (Serrano-Cinca and Gutiérrez-Nieto, 2014).

Despite the unique role of FNGOs in providing microfinance services with their social welfare logic in Ghana, there is a gap in the literature of their impact on the performance of MSEs (Amoako and Matlay, 2015). As much as the authors are aware, the current study is one of the few which focuses on examining FNGOs and their delivery of microcredit and entrepreneurship training to MSEs in Ghana. This study has twofold contributions. Firstly, this study contributes to the entrepreneurial finance literature by highlighting the role of FNGOs in the provision of microcredit and entrepreneurship training to the poor in support of their entrepreneurial development in Ghana. In particular, the study highlights the importance of the welfarist approach to microfinance delivery as opposed to the commercial approach. Secondly, this study concentrates on measuring the performance of MSEs in three main dimensions namely employment, sales and profitability growth. Again, this is one of the few studies in the Ghanaian context which seeks to assess the performance of MSEs in such a manner.

Background

The institutional logic of microfinance institutions

The microfinance literature highlights a multitude of actors with different types of institutional logic providing financial services to the poor. However, it is not clear how to classify these logics (IM and Sun, 2015; Radhakrishnan, 2015). The institutional logic perspective of MFIs explains how organisational actions are shaped by a shared belief about how microfinance should be delivered to the poor and the poorest of societies (Cobb *et al*. 2016). Thus, the institutional logic adopted by an MFI creates expectations on the MFI within the given context. Shahriar *et al*. (2016) argued that the institutional logic an MFI adopts determines its focus, services and products that it offers to the poor. Invariably, researchers have consistently traced the activities, strategies, actions, and internal operations of MFIs back to their adopted institutional logic (Cobb *et al*. 2016). Typically, three main institutional logics are present in the microfinance literature namely, the commercial, social welfare and hybrid logics (IM and Sun, 2015).

The social welfare logic perspective of MFIs argues that the poor and poverty reduction should be the focus of MFIs rather than profitability. This logic sees microfinance as a social service which is solely aimed at poverty reduction (Brau and Woller, 2004). This school of thought, therefore, argues that if MFIs focus on profitability, the tendency to lose their focus on the poor is high which eventually leads to mission drift (Copestake, 2007; Shahriar *et al*.,2016; Serrano-Cinca and Gutiérrez-Nieto, 2014). IM and Sun (2015) also pointed out that, MFIs which follow the social welfare logic tend to tolerate a moderate profit while focussing on serving the poor with the right products and services. The social welfare logic opines that institutional sustainability is very important, however, it is unethical and compromising to sacrifice the depth of outreach to the poor to achieve such acclaimed financial sustainability. It is suggested that subsidies and donations upon which microfinance activities has been built over the years can still make an institution sustainable without the overemphasis on profitability (Brau and Woller, 2004).

On the other hand, the commercial logic sees microfinance as a commercial activity which is intended to generate profit for the shareholders of the MFI (IM and Sun, 2015). The current observation is that many MFIs have shifted their foci from a social-oriented to a market-based approach (Allison *et al*., 2015; D' Espallier *et.al*, 2017). The proponents of the commercial logic argue that an MFI's financial viability is a pre-requisite to effective outreach to the poor. According to Woller and Woodworth (1999), MFIs should be able to cover operating and

financing costs through programme revenues rather than through donations and subsidies as proposed by the proponents of the social welfare logic. Moreover, only sustainable programs can make a real impact on poverty reduction. Copestake *et.al* (2005) again pointed out that profitability is a means to achieving the sustainability of microfinance programmes and can help to achieve the depth of outreach required of MFIs in developing countries.

Finally, MFIs adopting the hybrid institutional logic combines the commercial with the social welfare logics in the delivery of microfinance services. However, it has been noted that a hybrid of these logics comes with its attendant challenges of balancing the mission of outreach to the poor and the quest to be profitable (Battilana and Dorado, 2010; Besharov and Smith, 2014; de Haan and Lakwob, 2010). In summary, MFIs in their pursuit of serving the needs of the poor can choose to follow any of the above-mentioned logics (Ayele, 2015; IM and Sun, 2015), which subsequently influences the microfinance product design and delivery to the entrepreneurial poor.

From the above discussion, it is arguable that the proponents of the social welfare, commercial, or hybrid logic have different views on the methodology in offering financial services to the poor. Morduch (2000:617) referred to this debate as 'microfinance schism', while Woller et.al (1999:29) described the situation as 'two nations divided by a common language'. Ayele (2015) pointed out that, there exists a trade-off between the debates, yet the nature, extent and the implications of the trade-off have not been resolved. This implies that the way the debate is resolved will have a significant impact on microfinance delivery in terms of its guiding principles, objectives, and operational behaviour (Woller et.al,1999).

Financial services delivery and MSE growth in Ghana

Since independence in 1957, successive Ghanaian governments have tried to make financial services accessible to MSEs for the purposes of job creation and poverty reduction. However, current observations indicate that access to financial capital remains difficult to MSEs in Ghana with its rising cost and demand for securities which are usually out of reach for MSEs (Allen, Otchere, and Senbet, 2011; Doan and Oduro, 2012). Specifically, issues of the availability of suitable credit products, the effectiveness of service delivery and loan contracts, adequacy of loans granted as well as the cost of credit facilities are challenges that are still associated with the Ghanaian financial system (Egyir, 2010). The most recent population and housing census carried out in 2000 recounted that about 80% of Ghanaians work in the informal sector, who

lack access to any form of formal financial services. According to Akudugu (2013), the Ghanaian financial system faces two main challenges. Firstly, the system lacks the capacity to fully integrate the informal sector into the formal financial system due to limited financial resources. Secondly, the type of rules and regulations governing the financial sector seems to be unfavourable to the informal sector hence the current gap which exists between the formal and the informal sectors.

Even though some improvement has been observed over the years, accessibility and cost of financial services remain a drawback to the growth and expansion of MSEs (Atiase *et al*., 2018). Thus, the integration of the MSE sector into the formal financial system to create a financially inclusive economy has become a difficult process (Lash, 2008; Haag and Henschel, 2016). Due to the difficulties of accessing formal financial services from the Commercial Banks in Ghana, microcredit from MFIs has become a crucial choice for many MSEs. In fact, almost all Ghanaian Governments across different regimes have used microcredit through its parastatal agencies and local governments to support poverty reduction efforts (Addae-Korankye, 2012).

Through the government's own Microfinance and Small Loans Centre (MASLOC), microcredit is extended to many MSEs which are engaged in several types of economic activities such as farming, food processing, petty trading, service provision and street vending (Adjei, 2010; Addae-Korankye, 2012; Bunyaminu and Bashiru (2013). Typically, microcredit activities can be observed across the rural and urban areas of the ten regions of Ghana. These microcredit activities are provided with a host of institutions including the Government of Ghana dedicated programmes, donor assisted programmes, MFIs (such as FNGOs, Rural banks, Savings and Loans Companies, Credit Unions etc), District Assembly initiatives, Community-based initiatives (CBIs), or through Church-based programmes (Owusu-Frimpong, 2008; Peprah, 2012; Boateng, 2015). Unfortunately, many of the government and donor-oriented microcredit programmes have been difficult due to over-politicisation and political patronage reasons (Boateng, 2015). Therefore, the burden of providing microcredit to the MSE sector in Ghana lies largely in the hands of MFIs of which FNGOs are an important player due to their social welfare logic.

The social welfare logic of FNGOs in Ghana

In achieving their social objectives which includes poverty reduction for microfinance clients, it has been observed that FNGOs in Ghana adopt the social welfare institutional logic with a

very strong social mission (IM and Sun, 2015; Mersland and Strøm, 2008). Due to the sense of purpose and dynamism exhibited in FNGO outreach activities, FNGOs have become the main microfinance provider for poor people who are excluded from the formal financial systems. Through FNGOs, MSEs can access adequate microcredit which is relatively cheap and accessible, with flexible repayment terms (Habib and Jubb, 2013). In addition to microcredit, FNGOs also develop the managerial skills of MSE owners by providing entrepreneurship training. This is because, as pointed out by Newman *et al*. (2014) microfinance clients need not only microcredit to be successful in their entrepreneurial endeavours but also managerial capability. Therefore, the role of FNGOs in the provision of flexible microcredit and other related financial services, as well as entrepreneurship training, has been highlighted as critical to poverty reduction (Rajendran and Raya, 2011).

FNGOs are committed to uplifting the poor using both individual and group lending methods (Moseley and Rock, 2004). FNGOs are also independent of direct government control, quick in decision making and are strongly driven by social values (Rajendran and Raya, 2011). Invariably, the focus of FNGO lending activities is on women who are engaged in various economic activities. In some other cases, FNGOs are also effective in extending microcredit to the poor in conflict-affected areas (Morais and Ahmad, 2011). Khavul (2010) indicated that since FNGOs are non-profit oriented and are driven by a social mission, they are likely to be more sustainable than the commercially-oriented microfinance institutions. This study is organised into 6 sections including the introduction. Section 2 presents a discussion of the theory and hypothesis development. Section 3 discusses the research context and methodology. Whilst section 4 presents the statistical analysis and results, section 5 presents the findings of the study. Finally, section 6 draws a conclusion to the study.

Theory and hypotheses development

Institutional Theory and the operation of FNGOs in Ghana

Over the past several decades, the institutional theory has been used in entrepreneurship research to examine how enterprises evolve in pursuit of their organisational goals and the nature of the various environmental factors which affects their growth (North, 1990; Scott,1992; Sambharya and Musteen, 2014). DiMaggio and Powell (1983) decomposed the institutional notion into three dimensions, namely *coercive*, *normative*, and *mimetic isomorphic institutions*. These isomorphic institutions are discussed below in the Ghanaian context.

Coercive Isomorphic Institution

In delivering financial services to MSEs in Ghana, FNGOs are influenced by coercive institutions which are regulatory in nature. Coercive isomorphic institutions bring both formal and informal pressures on FNGOs and change their behaviour and structures in conformity to societal expectations (King *et al*. 2015; McGaughey *et al* 2016; Smith *et al*. 2016). Usually, such conformity means acquiring legitimacy for their operation and outreach services (King *et al*.,2015; Trapczynski and Banalieva, 2016). Legitimacy refers to the perception of an organisation's actions as acceptable and appropriates based on a well defined regulatory framework in a country (McQuarrie *et al.*, 2013; Deephouse *et al.* 2016). FNGOs in Ghana particularly the foreign-owned FNGOs such as World Vision International, and Opportunity International, need such legitimisation processes in order to gain acceptance. Fainshmidta *et al*. (2016) argued that state institutions may have an important impact on the performance of FNGOs in delivering financial services to MSEs. Weerawardena *et al.* (2010) also argued that, since FNGOs operate with social welfare logic in achieving their double bottom objectives, it is important they conform to various regulatory institutions.

Normative Isomorphic Institution

In the Ghanaian financial environment, FNGOs are also influenced by a host of normative isomorphic institutions which seek to enforce socially acceptable behaviours that are driven by societal morals, values and obligations (Alexander, 2012). Alexander (2012) argued that normative institutions not only define goals but also specify ways to pursue such goals to meet societal expectations. This implies that all value systems have their own rules of conformity. The normative institutions may include trade associations and professional associations that use social obligations to induce certain desirable behaviours in FNGOs (Kshetri, 2010).

Kshetri (2010) indicated that, for FNGOs to be successful in executing their socially-oriented financial services, they need to take into consideration the values and the normative frameworks which exist in a country. These normative frameworks refer to societal structures, practices, and standards which influence the manner in which FNGOs deliver their financial services to MSEs in Ghana (Follesdal, 2009; Serviere, 2010).

Mimetic Isomorphic Institution

In the Ghanaian financial services environment, FNGOs are influenced by mimetic isomorphic institutions in their attempt to adhere and adopt external values, culture, technology and operational frameworks. However, the adoption of these external values and frameworks has

the potential to influence the structures, processes, the focus of operation and values of FNGOs (Mizruchi and Fein, 1999). DiMaggio and Powell (1983) indicated that FNGOs are likely to mimic or imitate other organisations which they come into contact with. Thus, FNGOs in their attempt to provide financial services to MSEs are likely to be influenced by their peers or competitors (King *et al*. ,2015). According to Meyer and Rowan (1977), mimetic changes occur when organisations import rules and practices which may not couple properly with internal structures and may cause a wide internal variation in organisational behaviour.

The general framework of the institutional theory has implications for the operation of FNGOs in Ghana. In the provision of both microcredit and entrepreneurship training to MSEs, FNGOs could adopt and adapt to various strategies due to experiences from various institutional networks, uncertainties in the Ghanaian economic, political or governance factors as well as uncertainties relating to the cost of funds and changes in various financial regulations. More importantly, in the pursuance of their social welfare goals in serving MSEs, FNGOs could also be tempted to adopt various commercial approaches which may undermine their poverty reduction mission (Chahine and Tannir, 2010). With such changes in the structure, strategy and values of FNGOs, the delivery of microcredit and entrepreneurship training to MSEs could be compromised and consequently, the performance of MSEs could be affected negatively.

The impact of microcredit factors on the performance of MSEs

Microcredit has become the major source of funding for MSEs in Ghana. This is the case because, Ghanaian MSEs often face peculiar challenges such as information asymmetry, lack of credit history, inability to support loan applications with the required collateral and poor business structure (Lash, 2008; Mahmood *et al*. 2014; Haag and Henschel, 2016). Usually, microcredit received from FNGOs is used for business expansion purposes since most MFIs are often reluctant to finance start-up businesses due to the inherent risk involved (Kuzilwa, 2005). Bastiéa *et al.* (2016) indicated that MSEs' access to microcredit inspires their growth in terms of employment generation, sales growth and profitability growth. More so, the availability of microcredit to MSEs influences their business decision making processes and expansion drive (Guha and Chowdhury, 2013). Based on the above discussion and evidence in the literature, the study hypothesised as follows:

H_1: *Financial capital is positively related to the performance of MSEs.*

The impact of entrepreneurship training factors on the performance of MSEs

The lack of managerial capital in terms of experience, knowledge, and skills remains one of the challenges MSEs in Ghana face (Macht and Robinson, 2009; Abor and Quartey, 2010; Fatoki, 2011). Over the years, the entrepreneurship literature in line with the thinking of Yunus (1999) of the Grameen Bank portrays financial resources as the major constraint to microenterprise development. However, the entrepreneurship literature also points to the fact that human capital development through receiving entrepreneurship training and other skill development programmes can improve microenterprise performance (Raven and Le, 2015). Newman *et al*. (2014) also argued that MSEs need not only financial capital to be successful but also human capital. Chowdhury (2009) asserted that it is not just the issuance of loans to the poor and their MSEs that brings the solution to poverty, but rather the poor is expected to have entrepreneurial skills and creativity to succeed in managing their venture. Newman *et al*. (2014) noted that entrepreneurship training can be diverse ranging from a single consultation to a long-term training which can be individual or group-based, focusing on providing financial education, business management skills, marketing skills, accounting knowledge, or even vocational skills. Such training is expected to cause a change in the skills, knowledge and the attitude of MSE owners. Lau *et al*. (2012) argued that the acquisition of such managerial and cognitive skills is essential particularly for the managerial team because it influences the MSE's strategic decision-making processes. However, in developing human capital in MSEs, critical issues such as the content, frequency, efficiency, and accessibility issues are important in its delivery (Newkirk-Moore & Bracker,1998; Jantan *et al*., 2004; Sabella and Analoui, 2015; Kambwale *et al*.,2015). This is particularly important, given the fact that most FNGOs operate in rural areas where these MSEs are located. Based on the above discussion and evidence in the literature, the study postulates the following hypothesis:

H_2: *The quality of the human capital development in the MSE is positively related to performance*

From the above discussion, this study proposes a conceptual framework regarding microcredit and entrepreneurship training as constructs and the performance of MSEs in Ghana as shown in Figure1 below.

>>>Insert Figure I here<<<

Figure I: The model for the impact of microcredit and entrepreneurship training on MSE performance

Research context and methodology

This research was targeted at the microcredit clients of FNGOs in Ghana. According to the regulations, FNGOs in Ghana are classified either as tier II or III institutions with variations in their minimum capital, the focus of activity and operational zone (Bank of Ghana, 2015). Whiles tier II FNGOs take deposits from MSEs, tier III FNGOs depend mainly on the contributions from their founders and can raise funds from the capital market. FNGOs in Ghana usually adopt group lending method, known as the Trust Bank system which is seen as an effective strategy in delivering both microcredit and entrepreneurship training to the poor (Permanyer, 2014; Atiase *et al*, 2019). Typically, a Trust Bank consists of 10-20 borrowers who are taken through a series of business training programmes before loan disbursement. Average loan size ranges between $100 and $500 with a repayment period spanning between 4 to 6 months with an average interest rate of 6% per month (Ganle *et al*. 2015). To enable flexible repayment, lenders often offer a minimum of the 1-month moratorium to borrowers.

Sample and data collection procedure

This study adopted a stratified random sampling technique to investigate MSEs which are financed by FNGOs in Ghana. Four FNGOs were involved in this study, making the population of MSEs as 2953. Based on the various strata identified, 720 MSEs representing clients of the four FNGOs were sampled in March 2017. In April 2017, a hardcopy of the questionnaire was sent to the owners of the 720 MSEs. Out of the 720 questionnaires sent out, 506 fully completed questionnaires were retrieved which generated a response rate of 70.2%. The survey generated a high response rate because the FNGOs providing financial services to these MSEs adopted the group lending method and engaged with MSEs through weekly meetings. The researchers were offered an opportunity to access the MSE owners via these meetings. Table I presents the profile of the sampled MSEs which are found in the agricultural, construction, hotels and

restaurant, transport and distribution, general trading, general services and education sectors. General services represent business activities such as barber shops, hair salons, shoe repairs, communication services and such likes. General trading represents the sale of goods such as foodstuffs, water, and firewood. Construction represents the manufacturing of building blocks, the sale of cement and other building materials. Transport and distribution represent taxi service and commercial driving. Hotels and restaurant represent guest housing and food services. Education represents private basic school service only.

Table I: Profile of sampled MSEs

>>>Insert Table I here<<<

Constructs and Measures

Dependent variable

Measuring the performance of MSEs remains a complex challenge due to the lack of consensus on measurement. Raymond *et al*. (2011) documented two broad approaches to measuring MSE performance, namely the objective and subjective approaches. The objective approaches use parameters such as profitability, competitiveness, efficiency and productivity (Blackburn *et al*., 2013). On the other hand, MSE performance could also be measured using a subjective approach where factors such as stakeholder satisfaction, quality of community support, coherence and quality of human resources are employed (Le and Raven, 2015). However, it has been suggested that the performance measurement of MSEs should be multidimensional consisting of both financial indicators such as profitability growth, sales growth, market share, and return on equity, and non-financial indicators such as overall satisfaction of owners, customer satisfaction, employee satisfaction, customer loyalty, and brand awareness (Storey,1994; Fatoki, 2011; Blackburn *et al*., 2013; Le and Raven, 2015).

Chong (2008) proposed that four main approaches namely the goal approach, the system resource approach, the stakeholder approach, and the competitive value approach could be used in measuring the performance of MSEs. Whilst the goal approach measures the ability of an MSE to attain its goals, the system resource approach assesses the ability of the MSE to obtain resources for the effective operation of the enterprise. Both the competitive value and the stakeholder approach measure the performance of the MSEs by its ability to meet the needs

and expectations of customers, suppliers, and competitors. In a related study, Mudambi and Treichel (2005) indicated that there are seven performance measures for MSEs which include efficiency, growth, profit, size, liquidity, success or failure and leverage. Following Storey (1994), Fatoki (2011) and Blackburn *et al*. (2013), we employed three measurements namely *employment, sales* and *profitability growth* to measure the performance of MSEs. We captured employment, sales and profitability data from the sampled MSEs for a period of five years (2011-2015). The five-year growth data were then averaged for the regression analysis (see Singh *et al*., 2018).

Independent variables

In this study, two main constructs namely financial capital (microcredit) and human capital (entrepreneurship training) were used as independent variables. Following Angelucci *et al.* (2015), Kistruck *et al*. (2015) and Mahmood and Rosli (2013), we designed a four-factor construct including *loan cost, flexibility of loan repayment method, loan amount and loan accessibility* to measure microcredit. A total of 12 items were incorporated in the microcredit construct. Further, based on the studies of Be´chard and Toulouse (1998) and Rauch *et al*. (2005), a four-factor construct including *training content*, *training efficiency, training frequency,* and *training accessibility* was designed to measure entrepreneurship training. A total of 23 items was included in the entrepreneurship training construct. All items were measured on a Likert scale anchored by strongly disagree (1) and strongly agree (5) (See Appendix 1 for details).

Control variables

Apart from financial capital and human capital development, the performance of MSEs could be influenced by an array of other factors. Cooper *et al*. (1994) argued that factors such as educational background of the MSE owner, gender of the MSE owner, the available management and industry-specific knowledge within the management team, the age of the MSE, access to both domestic and international markets as well as the industry sector do influence the performance of MSEs. The current study controlled the gender of the MSE owner, owner's level of education, industry sector and business age. We employed a dummy variable for gender, coded as 1(male) and 0 (female). Seven industry sectors were identified *(agriculture, construction, hotels and restaurants, transport and distribution, general trading, education and general Services*). Dummy variables were used to represent sectors. For example, 1 and 0 were used to represent whether an MSE was in the manufacturing sector or

not. The same coding was applied to other industries. The manager's educational level was measured by using five categories (*1.no formal education, 2.primary school education, 3.secondary school education, 4. undergraduate degree and 5.postgraduate degree).* Finally, business age was expressed by the number of years since inception.

Model specification

To test the hypotheses, a model was constructed to examine the impact of financial capital and human capital on the performance of MSEs as follows:

$$\text{Employment Growth} = \alpha + \beta_1 GEN + \beta_2 EDU + \beta_3 IND + \beta_4 AGE + \beta_5 LOFLEX + \beta_6 LOCOS + \beta_7 LOAM + \beta_8 LOACC + \beta_9 ETCON + \beta_{10} ETEF + \beta_{11} FREET + \beta_{12} ACCET + \varepsilon$$

$$\text{Sales Growth} = \alpha + \beta_1 GEN + \beta_2 EDU + \beta_3 IND + \beta_4 AGE + \beta_5 LOFLEX + \beta_6 LOCOS + \beta_7 LOAM + \beta_8 LOACC + \beta_9 ETCON + \beta_{10} ETEF + \beta_{11} FREET + \beta_{12} ACCET + \varepsilon$$

$$\text{Profitability growth} = \alpha + \beta_1 GEN + \beta_2 EDU + \beta_3 IND + \beta_4 AGE + \beta_5 LOFLEX + \beta_6 LOCOS + \beta_7 LOAM + \beta_8 LOACC + \beta_9 ETCON + \beta_{10} ETEF + \beta_{11} FREET + \beta_{12} ACCET + \varepsilon$$

Where: α is the constant term, β_1 to β_{12} = regression coefficients, GEN= gender, EDU= manager's level of education, IND= industry sector, AGE= age of business, LOFLEX= loan flexibility, LOCOS= loan cost, LOAM= loan amount, LOACC= loan accessibility, ETCON= training content, ETEFF= training efficiency, FREET= Training frequency, ACCET= training accessibility.

Exploratory factor analysis

Following Anderson and Gerbing (1988), a principal component analysis with varimax rotation was executed to examine the factorial structure of both microcredit and entrepreneurship training factors. From the process, no dominant factor emerged to explain a significant variance, hence common method bias is not a major concern for this study (Hancock and Mueller, 2010). It is suggested that factors with low factor loadings (< 0.50 for new models, < 0.60 for existing models) should be deleted first and data recalculated until a higher value of 0.7 and above is achieved (Hancock and Mueller, 2010; Sidek and Mohamad, 2014). Factors with eigenvalue less than one were considered insignificant and were excluded. Items were only considered to have loaded properly if they had a loading of 0.200 or above on a factor and the difference between the main loading and other cross-loadings was more than 0.300 (Howell *et al*., 2005).

In terms of the microcredit construct, four factors with an eigenvalue greater than 1.000 arose and were consistent with the proposed constructs respectively representing *loan cost, the flexibility of loan repayment method, loan amount and loan accessibility.* The results of the KMO measure of sampling adequacy and Bartlett's test show that the data met the fundamental

requirements for factor analysis (Kaiser-Meyer-Olkin statistic: 0.697; Bartlett Test of Sphericity: $\chi 2$= 3,473.472**,** df= 66, *p*= 0.000). The four factors as identified above explained a total of 77.991 percent of the variance indicating a strong model. From the analysis, loan cost emerged as the most important factor with an eigenvalue of 3.152, explaining 26.265% of the variance in microcredit, while loan amount emerged as the least important factor with an eigenvalue of 1.562 and explaining 13.014% of the variance in microcredit.

Regarding the entrepreneurship training construct, four factors with an eigenvalue greater than 1.000 arose and were consistent with the proposed constructs respectively representing *training content, training efficiency, training frequency and training accessibility*. The results of the KMO measure of sampling adequacy and Bartlett's test show that the data met the fundamental requirements for factor analysis (Kaiser-Meyer-Olkin statistic: 0.878; Bartlett Test of Sphericity: $\chi 2$ =18,255.565, df= 253, *p*= 0.000). The four factors explained a total of 82.780 percent of the variance indicating a strong model. From the analysis, training content emerged as the most important factor with an eigenvalue of 9.759, explaining 42.4% of the variance in entrepreneurship training, while training accessibility was the least important factor with an eigenvalue of 1.766, explaining 7.6% of the variance in entrepreneurship training. Tables II and III below show the exploratory factor analysis of both the microcredit and entrepreneurship training constructs as well as factor loadings and cross-loadings for each item on factors.

Table II: Exploratory factor analysis for microcredit factors

>>>Insert Table II here<<<

Table III: Exploratory factor analysis for entrepreneurship factors

>>>Insert Table III here<<<

Reliability and validity test

The study utilised the Cronbach α test to examine the reliability of the microcredit and entrepreneurship training constructs. As shown in Table IV, all variables used in this study had a Cronbach α score of 0.700 and above and this was considered reliable and internally consistent (Sekaran, 2003; Hair *et al*., 2010). In terms of content validity, Parasuraman *et al*. (1988) stated that content validity of a construct depends on the extent to which the construct items represent the themes being measured. The constructs used in this study were believed to possess content validity because the constructs were developed from various microcredit and entrepreneurship training studies such as Be´chard and Toulouse (1998), Rauch *et al*. (2005), Angelucci (2015), Kistruck *et.al* (2015), de Oliveira *et al*. (2015) and storey (1994) where similar variables were used. Table IV below presents the reliability test of the variables used in this study.

Table IV: Results of reliability test for microcredit, entrepreneurship training, and MSE performance

>>>Insert Table IV here<<<

Results

The descriptive statistics in terms of the mean, standard deviations, minimum and maximum values, skewness and kurtosis of both the dependent and independent variables are presented in Table V below. Also, the correlation matrix for all the variables as well as the regression analysis of the various variables is presented in Tables VI and VII respectively. Since all the Variance Inflation Factors (VIF) values as seen in Table VII are relatively low, multicollinearity is not a major concern (Burns and Burns, 2008; Wang and Ahmed, 2009).

To test the hypotheses, the study adopted a multiple linear regression analysis. Hierarchical regression was executed to test the relationship among all the variables. Whilst model 1 represents regressions with control variables against dependent variables (employment, sales, and profitability growth), model 2 shows regressions involving control variables, independent variables and dependent variables.

Table V: Descriptive statistics

>>>Insert Table V here <<<

Table: VI: Correlation matrix for microcredit, entrepreneurship training, control variables and MSE performance

>>>Insert Table VI here <<<

Table VII: Regression analysis of MSE performance

>>>Insert Table VII here<<<

From the full regression model (model 2), the results are presented below.

The impact of FNGO microcredit on the performance of MSEs

Firstly, regarding the impact of microcredit on employment growth of MSEs, the results show that loan repayment flexibility (β=0.86, p <0.010) and loan cost (β = -0.052, p < 0.028) significantly predict employment growth at 5% level. The loan accessibility (β = 0.168, p < 0.000) and loan amount (β = 0.079 p < 0.000) are significantly related to employment growth at 1% level. Therefore, whilst a unit increase in loan amount increases employment growth by 7.9%, a unit increase in loan repayment flexibility increases employment growth by 8.6%. Similarly, whilst a unit increase in loan accessibility increases employment growth by 16.8%, a unit increase in loan cost decreases employment growth by 5.2%. Secondly, the findings regarding the impact of microcredit on sales growth of MSEs indicate that loan repayment flexibility and loan cost predict sales growth at 5% level. The loan amount and loan accessibility significantly predict sales growth at 1%. Finally, pertaining to the impact of microcredit on the profitability growth of MSEs, the results show that whilst loan cost is partially significant on profitability at 10% level, loan amount and loan accessibility are statistically significant on profitability growth at 1% level. Loan flexibility is not significantly related to profitability growth. Therefore, hypothesis H_1 is partially supported.

The impact of entrepreneurship training on the performance of MSEs

With regard to the impact of entrepreneurship training on employment growth of MSEs, the results indicate that training efficiency ($\beta = 0.090$, $p < 0.000$) and training frequency ($\beta=0.176$, $p <0.000$) significantly predict employment growth at 1% level. Whiles training content ($\beta=0.051$, $p< 0.050$) predicts employment growth at 5% level, training accessibility is partially significant at 10% ($\beta=0.049$, $p <0.062$). Whilst a unit increase in training efficiency increases employment growth by 9%, a unit increase in training frequency increases employment growth by 17.6%. Similarly, whilst a unit increase in training content increases employment growth by 5.1%, a unit increase in training accessibility increases employment growth by 4.9%.

Secondly, the results regarding the impact of entrepreneurship training on sales growth indicate that training efficiency and training frequency are statistically significant on sales growth at 1% level. Whilst training accessibility is statistically significant at 5% level, training content is partially statistically significant at 10% level. Finally, with respect to the impact of entrepreneurship training on the profitability of MSEs, the results show that whilst training frequency is statistically significant at 1% level, training efficiency is statistically significant at 5% level. Both training content and training accessibility are statistically insignificant in predicting profitability growth of MSEs. Therefore, the hypothesis H_2 *is* also supported as shown in Figure II below.

Figure II: The results model for the impact of financial and human capital on MSE performance

>>>Insert Figure II here<<<

The influence of MSE characteristics on performance

In terms of the control variables, the results show that MSE characteristics such as the business age and industry sector (i.e. general services) are significantly associated with employment, sales and profitability growth of MSEs at 1% level. However, gender only influences employment and profitability growth at 10% level. The results show that gender does not have any influence on the sales growth of MSEs. Finally, the manager's education and other industry dummy variables are insignificant.

The models are significant at 1% level. The adjusted R^2 values of model 2 imply that the full regression model can explain the variances of employment, sales and profitability growth by 32.5%, 27.6%, and 15.7% respectively. Moreover, it could be observed that there has been a significant change in the adjusted R^2 values from model 1 to model 2. For instance, the adjusted R^2 value for employment growth has changed from 17.7% in model 1 to 32.5% in model 2. Similarly, the value for sales growth has changed from 13.4% in model 1 to 27.6% in model 2. For profitability growth, it has changed from 8.2% to 15.7%. These changes imply that the independent variables account for significant variance in the performance of MSEs. The results also indicate that there is a correlation between employment, sales and profitability (Table VI). More so, the manager's level of education is positively correlated with employment, sales and profitability growth (Table VI).

Discussion

FNGOs are important MFIs due to their social welfare logic. The results show loan accessibility, amount and flexibility of loan repayment can benefit operations of MSEs. However, the cost of microcredit has a negative impact on MSE performance. As noted in the previous discussions, FNGOs remained one of the dominant providers of microcredit to MSEs due to their social welfare orientation. However, even though microcredit from FNGOs has remained the most accessible financial choice for MSEs, the cost associated with their services has become burdensome to MSE growth, expansion and their general contribution to the Ghanaian economy (Donou-Adonsoua and Sylwester, 2016). Aboagye (2012) pointed out that one factor which can inhibit MSEs' access to microcredit is its cost. Most FNGOs in Ghana charge on average 6% per month on their loans and this runs into 72% per annum. The cost of credit is expensive and inhibitive to MSEs's growth and performance (Abor and Quartey, 2010; Egyir, 2010). In addition, it shows a sign of mission drift in FNGOs and thereby threatens the sustainability of FNGOs. Many MSEs struggle to meet their loan repayment terms which leads to a very high loan default rate in the microfinance sector (Hamilton and Fox, 1998).

In support of the growth of MSEs, the provision of a cost-effective credit is a pre-requisite and the situation currently needs to be improved (Osei-Assibey, 2011). The Ghanaian government through its microfinance programme and other schemes could be helpful in providing cheaper financial capital to support the growth of MSEs. Such support will also help FNGOs in offering services of microcredit and entrepreneurship training.

Another important finding derived from the current study indicates the need for human capital development services along with financial capital (Newman *et al*., 2014). MSE owners need to be equipped with entrepreneurial and managerial skills which will improve the performance of their MSEs (Newman *et al*. 2014; Raven and Le, 2015). In fact, the high failure rate and poor performance of MSEs in Ghana has been largely attributed to the lack of managerial capacity of MSE managers (Fatoki, 2011; Rambe and Makhalemele, 2015). Therefore, FNGOs, in order to fulfil their social welfare objective, have to deliver managerial and entrepreneurial training to MSEs. In this process, the design of training content, frequency, efficiency, and accessibility are important that demand attention from both practitioners and academics. The results arising from the study indicate that training programmes provided by FNGOs have a tremendous impact on the performance of MSEs. For instance, training content has a significant impact on the employment growth of MSEs. This implies that for entrepreneurship training programmes to yield the best results, the quality of the content of such programmes is essential (Kanungo and Misra,1992; Sidek and Mohamad, 2014). More so, training frequency is found to have a significant impact on the employment growth of MSEs. However, training accessibility and content, even though having a positive impact on employment and sales growth, do not explain the profitability growth of MSEs. FNGOs, therefore, need to adjust training content to focus on skill development that is aimed at reducing operational costs of MSEs as well as increasing their profitability. Secondly, FNGOs also need to reduce training accessibility barriers to improve the profitability of MSEs (Al-Madhoun, 2006; Kambwale *et al*., 2015).

Conclusion

In contrast to the existing literature on the impact of microcredit on MSEs' performance (Newman *et al*. 2014), this study shows that the provision of microcredit should be accompanied with entrepreneurship training and managerial capacity building. MSEs also need support in terms of access to cheap, reliable, and accessible credit with flexible repayment terms. This study suggests that there is the need for all stakeholders in Ghana including the central government, banks, donor communities and other financial institutions to support the current effort of FNGOs in providing financial services to MSEs. Furthermore, the study indicates that the institutional logic of an FNGO influences its ability in designing loan products and other training services that meet the needs of MSEs. Typically, FNGOs with their social welfare logic, are concerned with the provision of human capital development services along with microcredit delivery. This essentially enables superior performance and sustainability of MSEs which in turn influences the sustainability of the FNGO.

Research limitations

Even though the sample size of the study suffices, the generalisability of this study is limited. Secondly, this study depends on quantitative data and could benefit from qualitative inputs to complement or confirm the findings of this study. Lastly, the inability to measure the potential deviation from the long-term growth average is another limitation.

Recommendations for future research

Future research could benefit from efforts on the following four directions. Firstly, future research could engage with microfinance institutions with a purely commercial logic to assess the impact of their services on MSE performance. Secondly, the study could be extended beyond the Volta region of Ghana to explore whether similar results can be gained so that the generalisability of the study can be improved. Finally, we suggest a qualitative approach be followed in a future endeavour whereby the findings could be used to confirm or complement those derived from the current study.

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Appendix 1: Description of variables

Constructs	Variable	Variable Use	Description
Performance	Employment growth	Dependent Variable	Employment growth was measured by using a five –year employment growth data (2011-2015). The average of these data was used in the regression analysis.
	Profitability growth	Dependent Variable	Profitability growth was measured by using a five –year sales growth data (2011-2015).The average of these data was used in the regression analysis.
	Sales growth	Dependent Variable	Sales growth was measured by using a five –year profitability growth data (2011-2015).The average of these data was used in the regression analysis.
Control Variables	Gender	Control Variable	Gender was measured by using a dummy variable coded as 1(male) and 0 (female).
	Business age	Control Variable	Business age was expressed in terms of the number of years since the inception of the MSE.
	Industry category	Control Variable	Each industry category was measured by using a dummy variable *(agriculture, construction, hotels and restaurants, transport and distribution, general trading, education and general services*).
	Manager's Education	Control Variable	Manager's education was measured by using a categorical variable (*1.no formal education, 2.primary school education, 3.secondary school education, 4. undergraduate degree and 5.postgraduate degree)*
Microcredit (Financial Capital)	Loan Amount	Independent variable	The loan amount was measured by using three items indicating sufficiency of the loan amount for the business, satisfaction with the loan amount and whether the loan amount granted by the FNGO was less than the amount applied for.
	Loan accessibility	Independent variable	Loan accessibility was measured using three items namely the ability to understand loan requirements, whether loan application and approval process were cumbersome and finally whether loans applied for were timely approved.
	Loan cost	Independent variable	Loan cost was measured by three items associated with microcredit namely loan interest, processing fees and loan deposit (cash collateral).
	Loan flexibility	Independent variable	Loan flexibility was measured by using three items namely flexibility of repayment schedule, the flexibility of loan repayment amount (instalment) and the convenience of loan term to meet business needs.
Entrepreneurship Training (Human Capital)	ET accessibility	Independent variable	Training accessibility was measured by using two items namely the difficulty in accessing training from FNGOs and the general satisfaction with access to training from FNGOs.
	ET frequency	Independent variable	Training frequency was also measured by using five items namely satisfaction with the frequency of training provided, whether training does not disrupt planned business activities, whether the frequency of training enabled knowledge application, whether training frequency encourages participation in future training, and whether training frequency ensures update of current issues in the MSEs.
	ET content	Independent variable	Training content was measured by using four items namely managerial skills, soft skills, technical and operational skills

	ET efficiency	Independent variable	Training efficiency was measured by using five items namely cost of training, timeliness of training, whether training was well understood by managers, whether training supported manager's personal development and whether the training provided by FNGOs helped in resolving identifiable business challenges.

Appendix 2: Factor extraction for financial capital (microcredit) construct

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.152	26.265	26.265	3.152	26.265	26.265	2.473	20.607	20.607
2	2.698	22.481	48.745	2.698	22.481	48.745	2.463	20.525	41.132
3	1.948	16.232	64.977	1.948	16.232	64.977	2.381	19.842	60.974
4	1.562	13.014	77.991	1.562	13.014	77.991	2.042	17.017	77.991
5	.640	5.335	83.326						
6	.471	3.926	87.252						
7	.411	3.422	90.675						
8	.379	3.155	93.830						
9	.338	2.814	96.644						
10	.153	1.274	97.918						
11	.140	1.163	99.081						
12	.110	.919	100.000						

Extraction Method: Principal Component Analysis.

Appendix 3: Scree Plot of financial capital (microcredit) factors

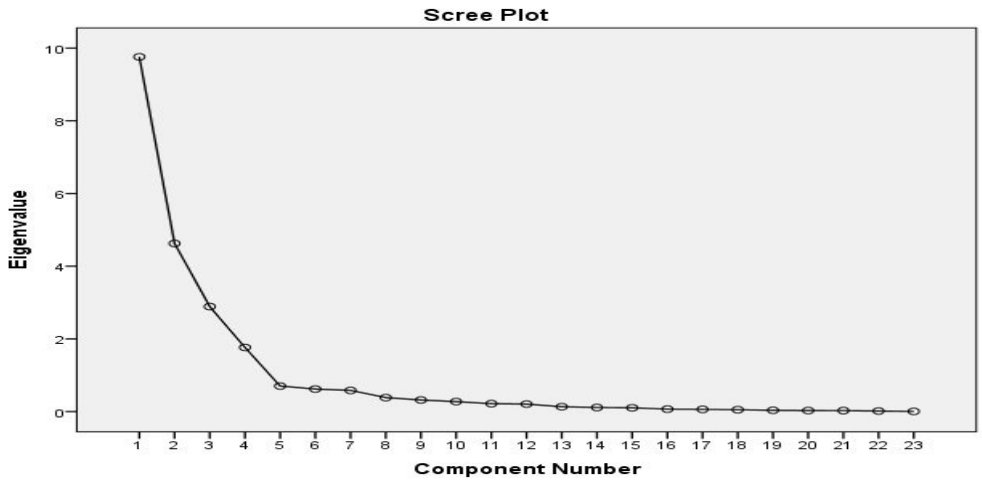
Appendix 4: Factor extraction for human capital (entrepreneurship training) construct

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared			Rotation Sums of Squared		
	Total	% of	Cumulative	Total	% of	Cumulative	Total	% of	Cumulative
1	9.759	42.432	42.432	9.759	42.432	42.432	9.537	41.466	41.466
2	4.625	20.111	62.542	4.625	20.111	62.542	3.948	17.163	58.629
3	2.888	12.557	75.100	2.888	12.557	75.100	3.618	15.731	74.360
4	1.766	7.680	82.780	1.766	7.680	82.780	1.937	8.420	82.780
5	.703	3.057	85.837						
6	.621	2.702	88.539						
7	.584	2.539	91.078						
8	.385	1.674	92.751						
9	.320	1.390	94.141						
10	.275	1.197	95.338						
11	.219	.953	96.291						
12	.206	.896	97.188						
13	.135	.585	97.773						
14	.113	.491	98.264						
15	.105	.455	98.719						
16	.069	.299	99.017						
17	.061	.266	99.284						
18	.052	.224	99.508						
19	.036	.158	99.666						
20	.029	.125	99.791						
21	.027	.117	99.908						
22	.016	.069	99.977						
23	.005	.023	100.000						

Extraction Method: Principal Component Analysis.

Appendix 5: Scree plot for human capital (entrepreneurship training) factors



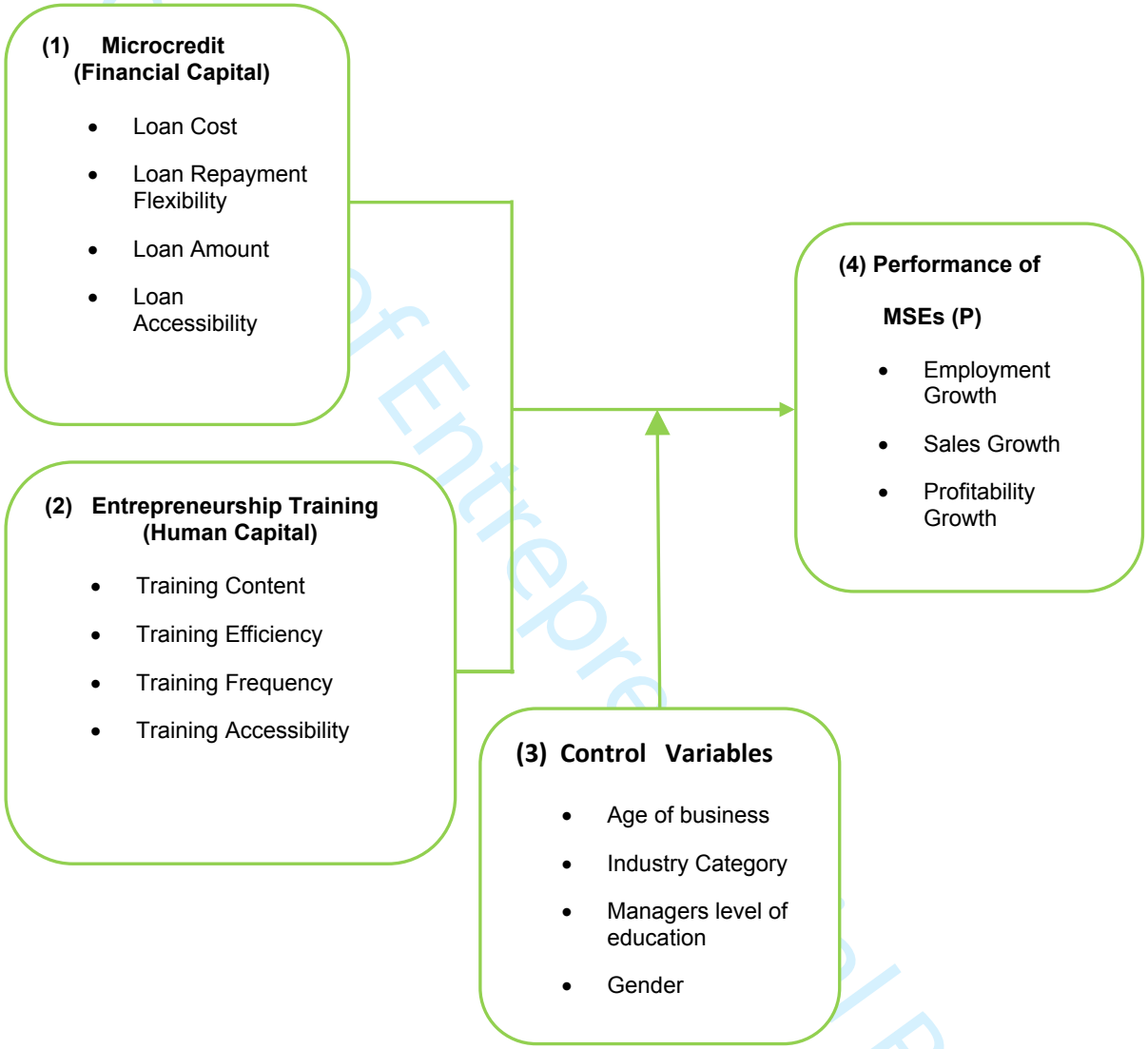


Figure I: The model for the impact of microcredit and entrepreneurship training on MSE performance

Table I: Profile of sampled MSEs

Demographic Variables	Frequency	%
Agriculture	5	1
Construction	10	2
Hotels and Restaurants	22	4.0
Transport and distribution	98	19.4
General Trading	185	36.6
General Services	178	35.2
Education	8	1.6
Total	**506**	**100**
Age of Business		
0-5yrs	21	4.1
6-10yrs	75	14.9
11-15yrs	307	60.7
16yrs+	103	20.4
Total	**506**	**100**

Table II: Exploratory factor analysis for microcredit factors

Rotated Component Matrix[a]

	Components			
	Factor 1 Loan Cost	**Factor 2 Repayment Flexibility**	**Factor 3 Loan Amount**	**Factor 4 Loan Accessibility**
Loan was sufficient for business	0.127	-0.059	**0.929**	0.006
Satisfied with loan amount granted over the 3 years period	0.104	0.017	**0.916**	-0.029
The loan amount granted was less than applied	0.032	-0.138	**0.788**	-0.111
Understand requirements for accessing loan	-0.078	0.061	-0.018	**0.762**
Application process was not cumbersome	-0.034	0.056	-0.056	**0.871**
Timely approval of loan	-0.059	0.120	-0.055	**0.787**
Affordable interest charges	**0.908**	0.026	0.084	0.074
Bearable processing fees	**0.931**	0.082	0.080	-0.131
Affordable loan deposit	**0.859**	0.024	0.101	-0.148
Flexible loan schedule	0.026	**0.831**	0.028	0.128
Affordable loan repayment	0.058	**0.928**	-0.107	0.078
Convenient loan term	0.045	**0.927**	-0.119	0.051
Eigenvalues	**3.152**	**2.698**	**1.948**	**1.562**
% of Variance Explained	**26.265**	**22.481**	**16.232**	**13.014**
Kaiser—Meyer-Olkin Measure of Sampling Adequacy	**0.697**			
Bartlett's Test of Sphericity				
Approx. Chi-Square	**3473.472**			
df	**66**			
Sig	**0.000**			

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 5 iterations.

Table III: Exploratory factor analysis for entrepreneurship factors

Rotated Component Matrix[a]

	Components			
	Factor 1 Training Content	**Factor 2 Training Efficiency**	**Factor 3 Training Frequency**	**Factor 4 Training Accessibility**
Difficulty in accessing training from FNGOs	0.012	0.001	0.081	**0.963**
Training obtained from FNGOs has been satisfactory	0.092	0.019	0.172	**0.939**
Training frequency from FNGOs is satisfactory	0.092	0.051	**0.841**	-0.004
The frequency of training does not disrupt my scheduled business activities	0.098	0.071	**0.867**	-0.012
Frequency of training enables knowledge application	0.074	0.081	**0.862**	0.011
Frequency of training encourages my participation in training	0.052	0.113	**0.843**	0.106
The frequency of training ensures my update of business-related knowledge	0.067	0.136	**0.755**	0.245
Training included lesson new management methods	**0.637**	-0.026	0.061	0.009
Training included lesson on financial accounting	**0.955**	-0.024	0.081	0.089
Training included lessons on customer relationship management	**0.964**	-0.037	.089	0.071
Training included lessons on the use of management information systems	**0.955**	-0.041	0.091	0.095
Training included lessons on leadership and teamwork skills	**0.973**	-0.011	0.093	0.069
Training included lessons on creativity and problem-solving skills	**0.974**	-.019	0.088	0.068
Training included lessons on the development of interpersonal communication skills	**0.975**	-0.032	0.061	0.048
Training included lessons on workplace safety	**0.958**	-0.077	0.026	-0.046
Training included lessons on use of machinery	**0.934**	-0.068	0.041	-0.023
Training included lessons on service delivery methods	**0.953**	-0.066	0.030	-0.041
Training included lessons on new product and service innovation	**0.873**	-0.057	0.020	-0.073
Training is cost-effective	-0.066	**0.842**	0.129	-0.048
Training is timely	-0.088	**0.916**	0.100	0.078
Training is well-delivered and understood	-0.100	**0.938**	0.118	0.047
Training is beneficial for my personal development	-0.095	**0.933**	0.073	-0.044
Training resolved my current business challenges	0.052	**0.761**	0.038	0.008
Eigenvalues	**9.759**	**4.625**	**2.888**	**1.766**
% of variance explained	**42.432**	**20.111**	**12.557**	**7.680**

Kaiser—Meyer-Olkin Measure of Sampling Adequacy	**0.878**
Bartlett's Test of Sphericity	**18255.565**
Approx. Chi-Square	**253**
Sig	**0.000**

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 5 iterations.

Table IV: Results of reliability test for microcredit, entrepreneurship training and MSE performance

Factors	Cronbach's Alpha	Cronbach's Alpha based on standardised items	No. of items
(1) Loan Cost	0.887	0.893	3
(2) Loan Repaymemt Flexibility	0.886	0.888	3
(3) Loan Amount	0.865	0.864	3
(4) Loan Accessibility	0.739	0.748	3
(5) Training Content	0.977	0.983	11
(6) Training Efficiency	0.926	0.931	5
(7) Training Frequency	0.897	0.900	5
(8) Training Accessibility	0.934	0.943	2
Performance			
(1) Employment Growth	0.907	0.913	10
(2) Sales Growth	0.890	0.901	5
(3) Profitability Growth	0.801	0.826	5

Table V: Descriptive statistics

Descriptive Statistics

Variable	Minimum	Maximum	Mean	Std. Dev.	Skewness		Kurtosis	
					Statistic	Std. Error	Statistic	Std. Error
Employment growth	2.00	5.00	4.2588	.46477	0.624	.109	0.256	.217
Profitability growth	2.00	5.00	4.1956	.51441	0.157	.109	0.563	.217
Sales growth	2.00	5.00	4.2470	.45841	0.675	.109	0.427	.217
Gender	0.00	1.00	0.8538	0.354	-2.008	.109	2.041	.217
Business age	2.00	5.00	4.0000	.66003	-0.290	.109	0.192	.217
Industry-Agriculture	0.00	1.00	0.0099	0.0990	9.940	.109	97.179	.217
Industry-Construction	0.00	1.00	0.0198	0.1393	6.921	.109	46.086	.217
Industry-Hotel & Restaurants	0.00	1.00	0.0435	0.2041	4.491	.109	18.237	.217
Industry-Transport	0.00	1.00	0.1937	0.3956	1.555	.109	0.419	.217
Industry-Trading	0.00	1.00	0.3656	0.4821	0.560	.109	-1.693	.217
Industry-General Services	0.00	1.00	0.3518	0.4780	0.630	.109	-1.619	.217
Industry-Education	0.00	1.00	0.0158	0.12486	7.786	.109	58.858	.217
Manager's Education	2.00	6.00	5.0909	0.65675	-0.644	.109	1.555	.217
Loan Amount	1.00	5.00	3.9920	1.00381	-1.430	.109	1.821	.217
Loan accessibility	2.66	5.00	4.0474	0.51804	-0.010	.109	0.918	.217
Loan cost	1.00	5.00	4.2248	0.78031	-0.839	.109	0.586	.217
Loan flexibility	1.00	5.00	4.0904	0.60982	-2.003	.109	8.815	.217
ET accessibility	2.00	5.00	3.6798	0.67799	-0.347	.109	0.114	.217
ET frequency	0.00	5.00	3.9565	0.56821	-0.658	.109	4.510	.217
ET content	1.00	5.00	4.3616	0.66325	-1.158	.109	2.359	.217
ET efficiency	1.00	5.00	4.1805	0.81887	-0.801	.109	0.209	.217
Valid (listwise: 506)	506							

T

	1	2	3	4
Employment	-			
Sales	.926***			
Profitability	.765***	.744***	-	
Gender	.124***	.100**	.103**	-
Manager's Educ. Level	.169***	.155***	.094**	.158***
Industry-Agriculture	-0.056	-0.054	-0.038	-0.072
Industry-Construction	-0.079*	-0.077*	-0.054	-.102**
Industry-Hotel-Resturant	-.119***	-0.052	-.100**	0.002
Industry-Transport-Distribution	-.144***	-.133***	-.128***	-0.079*
Industry-Trading	-.105**	-.123***	-0.018	0.034
Industry-General Services	.329***	.308***	.203***	0.087*
Industry-Education	-0.071	-0.068	-0.048	-0.046
Business Age	.252***	.203***	.204***	0.014
Loan Repayment Flexibility	.258***	.248***	.158***	0.048
Loan Cost	-0.013	-0.012	-0.042	-0.013
Loan Amount	.279***	.265***	.204***	0.035
Loan Accessibility	.308***	.298***	.252***	0.02
ET Content	0.085*	0.075*	0.057	-.098**
ET Efficiency	.144***	.088**	.106**	-0.042
ET Frequency	.243***	.252***	.161***	0.018
ET Accessibility	.188***	.191***	.106**	0.073

*** Correlation is significant at the 0.01 level (2-tailed).

** Correlation is significant at the 0.05 level (2-tailed).

* Correlation is significant at the 0.1 level (2-tailed).

'able VI-Correlation matrix for microcredit, entrepreneurship training, control var

5	6	7	8	9	10	11
-						
-0.014	-					
-0.041	-0.014	-				
-0.074*	-0.021	-0.03	-			
0.001	-0.049	-0.07	-.104**	-		
-.168***	-0.076*	-.108**	-.162***	-.372***	-	
.232***	-0.074*	-.105**	-.157***	-.361***	-.559***	-
-0.066	-0.013	-0.018	-0.027	-0.062	-.096**	-.093**
0.064	0.061	-0.065	-0.073*	-.137***	.156***	-0.006
.169***	-0.048	-.103**	0.04	-0.007	-.268***	.348***
.149***	-0.054	0.005	-0.012	0.009	-.190***	.195***
.111**	-.139***	-0.056	-0.066	-0.013	-.193***	.307***
.094**	-0.073*	-0.077*	-0.082*	-.093**	0.065	.095**
-0.039	-0.024	0.008	-0.068	-0.001	-0.012	0.025
-.096**	.100**	-0.031	-0.083*	-0.065	.199***	-.136***
0.043	0.007	-0.016	-0.055	-0.019	-.170***	.212***
.119***	0.047	-0.017	.101**	-0.027	-.138***	.116***

iables and MSE performance

12	13	14	15	16	17	18
-						
0	-					
-.188***	0.014	-				
0.014	-.111**	.280***	-			
-.110**	0	.333***	.104**	-		
-0.042	.429***	.097**	-0.019	-0.014	-	
0.074*	0.057	-0.067	0.033	.094**	0.011	-
0.05	.115***	-0.044	-.147***	-0.071	.137***	0.04
0.009	-0.038	.088**	0.061	0.064	-0.047	-0.031
-0.01	.115***	.180***	.097**	0.074*	.143***	0.008

19	20
-	
-.146***	-
0.054	0.057

Table VII: Regression analysis of MSE performance

Multiple regression analysis of MSE performance

	Employment Growth								Sales Growth								Profitability Growth							
	Model 1				Model 2				Model 1				Model 2				Model 1				Model 2			
	ß	St. Err.	Sig.	VIF	*ß*	St. Err	Sig.	VIF	*ß*	St. Err.	Sig.	VIF	*ß*	St. Err.	Sig.	VIF	*ß*	St. Err.	Sig.	VIF	*ß*	St. Err.	Sig.	VIF
Gender	.168*	.09	.064	1.052	.179**	.083	.031	1.069	.118	.092	.199	1.052	.123	.084	.144	1.069	.174	.106	.100	1.052	.184*	.102	.073	1.069
Manager's Edu.	0.047	.03	.114	1.099	.045**	.028	.099	1.132	.046	.03	.130	1.099	.041	.028	.143	1.132	.020	.035	.564	1.099	.019	.034	.570	1.132
Industry-Agric.	-.215	.192	.262	1.025	-.135	.178	.448	1.07	-.193	.194	.320	1.025	-.091	.181	.615	1.070	-.196	.224	.383	1.025	-.087	.219	.690	1.07
Industry-Const.	-.091	.138	.512	1.054	-.010	.126	.935	1.066	-.091	.14	.514	1.054	-.021	.129	.871	1.066	-.090	.162	.578	1.054	-.019	.156	.904	1.066
Industry-Hotel	-.127	.096	.184	1.084	-.094	.089	.291	1.151	.018	.097	.849	1.084	.038	.091	.673	1.151	-.172	.112	.124	1.084	-.134	.110	.226	1.151
Industry-Transp.	-.017	.054	.751	1.293	-.039	.05	.441	1.350	-.008	.055	.887	1.293	-.036	.051	.485	1.350	-.070	.063	.264	1.293	-.086	.062	.164	1.350
Industry-GS	.277***	.046	.000	1.358	.155***	.047	.001	1.716	.267***	.046	.000	1.358	.138***	.048	.004	1.716	.164***	.053	.002	1.358	.066	.058	.253	1.716
Industry-Educ.	-.148	.153	.334	1.031	-.063	.141	.653	1.073	-.135	.154	.383	1.031	-.050	.144	.728	1.073	-.145	.178	.418	1.031	-.061	.174	.727	1.073
Business Age	.171***	.029	.000	1.052	.089***	.029	.002	1.304	.139***	.03	.000	1.052	.053*	.030	.078	1.304	.149***	.034	.000	1.052	.074**	.036	.043	1.304
Loan Flexibility					.086**	.033	.010	1.401					.078**	.034	.021	1.401					.060	.041	.145	1.401
Loan Cost					-.052**	.023	.028	1.160					-.054**	.024	.024	1.160					-.052*	.029	.072	1.16
Loan Amount					.079***	.019	.000	1.235					.077***	.019	.000	1.235					.076***	.023	.001	1.235
Loan Accessibility					.168***	.038	.000	1.312					.190***	.038	.000	1.312					.171***	.046	.000	1.312
ET Content					.051**	.026	.050	1.05					.048*	.027	.075	1.05					.037	.032	.260	1.05
ET Efficiency					.090***	.022	.000	1.126					.059***	.022	.009	1.126					.061**	.027	.026	1.126
ET Frequency					.176***	.031	.000	1.072					.181***	.032	.000	1.072					.138***	.038	.000	1.072
ET Accessibility					.049*	.026	.062	1.109					.054**	.027	.046	1.109					.021	.033	.513	1.109

R^2	0.192	0.348	0.149	0.301	0.098	0.186
Adj. R^2	0.177	0.325	0.134	0.276	0.082	0.157
ANOVA F	13.091	15.290	9.665	12.334	5.987	6.544
Sig. F	0	0	0	0	0	0
N	506	506	506	506	506	506

Note: The table shows the unstandardised coefficients (ß), the value of the adjusted R^2, the significance levels and *F* change. The levels of significance are: *p<0.1, **p<0.05, ***p<0.01

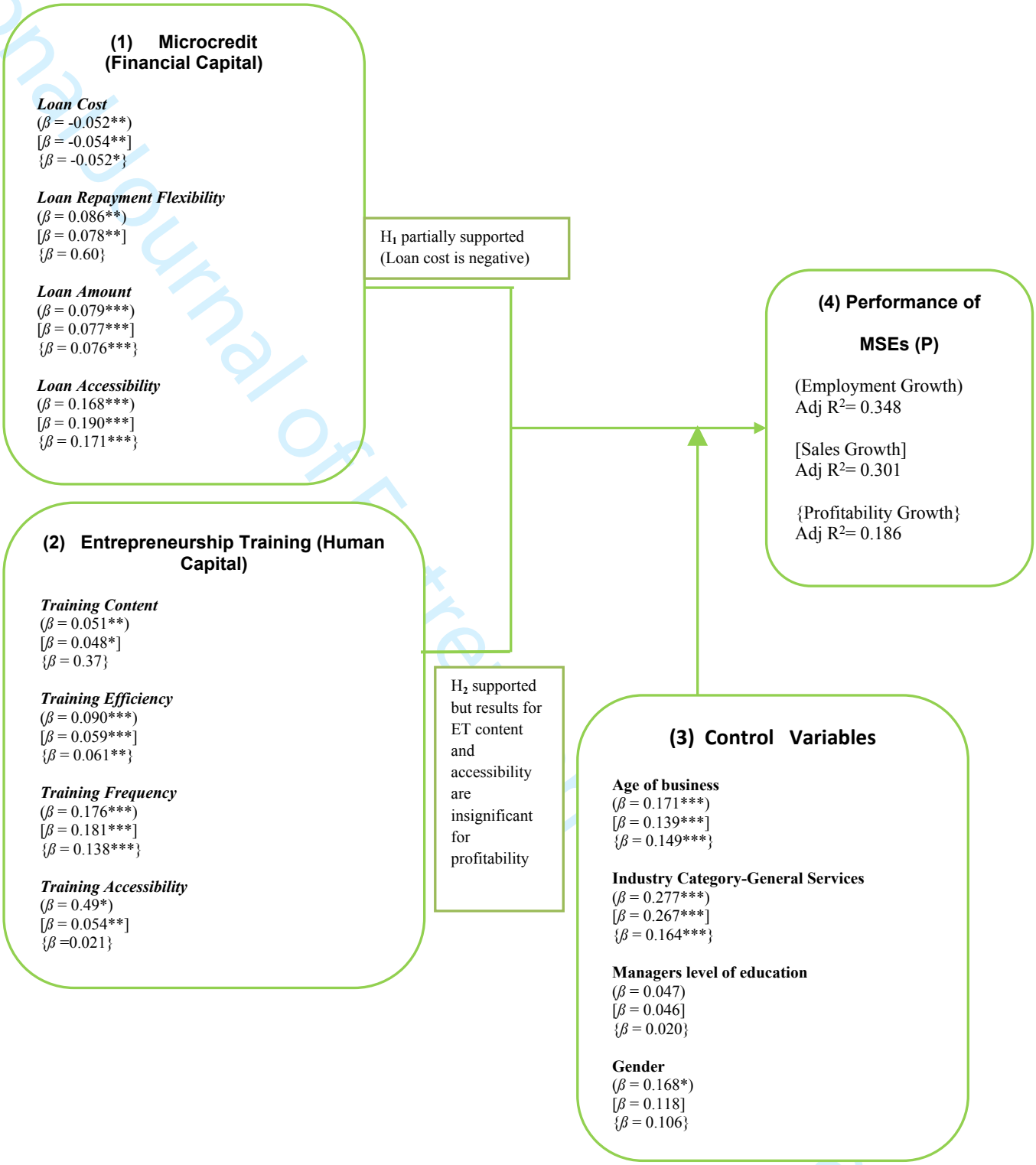


Figure II: The results model for the impact of financial and human capital on MSE performance

Reviewer 1		
	Page No.	Author Notes
This is a good paper that provides some interesting findings and makes a significant contribution towards the emerging literature.		Thank you for your feedback and comments to improve this paper
Reviewer 2		
You had a nice paper, and having worked on some revisions, I think it has improved. Could you please add a copy of Figure 1 into your results section and show how your original logic model performed against the results? And to reduce the length of your paper there is no need to report every R2 and change in R2 in the text, or indeed every coefficient and significance test. We can all read a table of results. Nice work.	Page 18	Thank you for the feedback. We have read through the whole article and reduce the repetition of statistics and added Figure II to show how the original logic model performed against the results.
Results: The results are presented clearly and at great length. The analysis is very methodical and appropriate. I would say that there is less need to cite the R2 and change in R2 for each model and cite every coefficient and significance as this significantly extends the paper which is very long.	Page 17-19	Thank you for this comment. We have reduced the coefficient, significance and R2 values from the results and discussion.
What I would like to see is your Figure 1 in the results section with the results (positive, negative, no effect etc) included.	Figure II (page 18)	Thank you for this comment. We have now added Figure II with results.
